



# NEW BEDFORD FAIRHAVEN HARBOR



Three parts to tonight's presentation:

1. Navigational dredging update
2. Superfund cleanup: background & this year's work
3. Update on EPA's analyses of potential alternatives

hurricane barrier

Rt 195

Aerovox facility



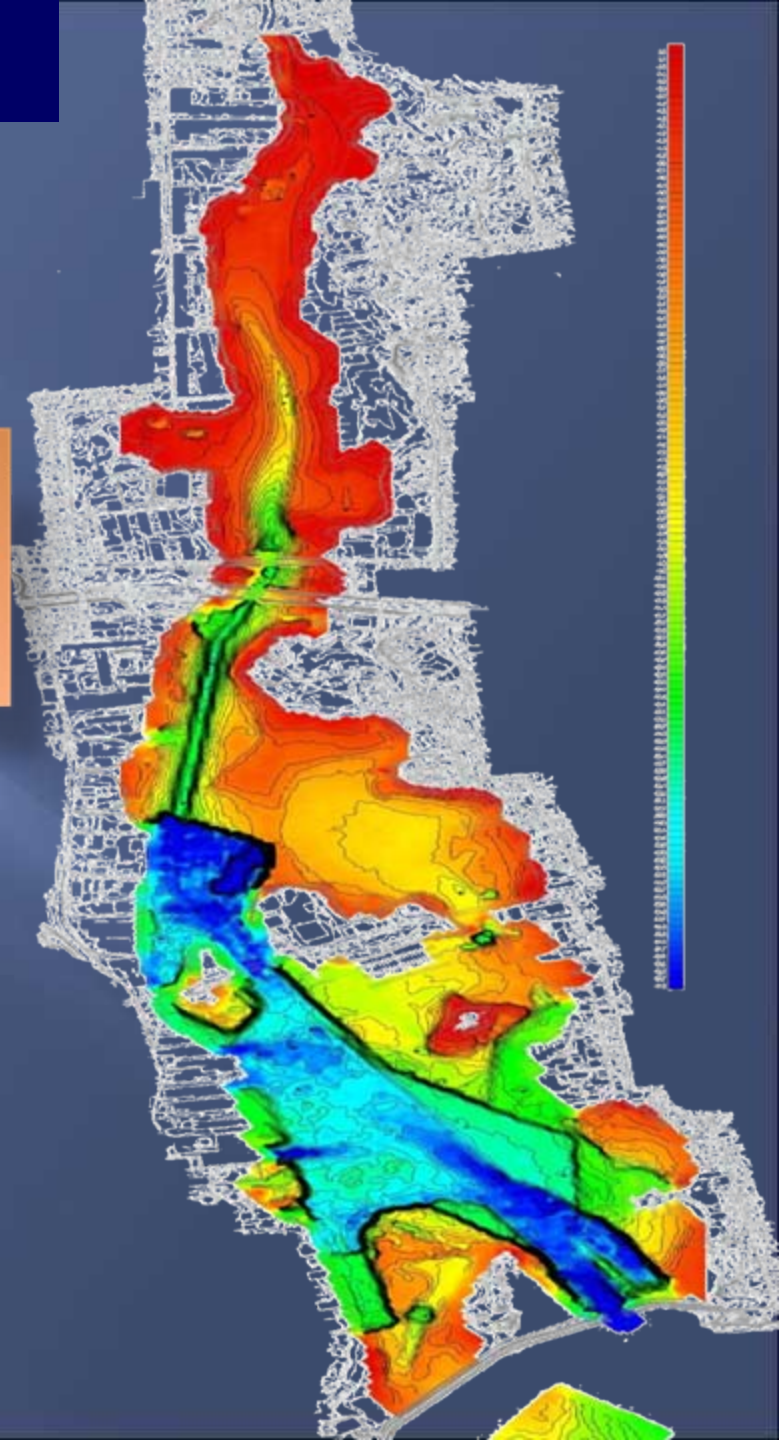
# New Bedford/Fairhaven Harbor Navigational Dredging



What is Navigational Dredging?

Why is it important?

# Environmental Remedy



# Supports Maritime Industries

Over 4,400  
Jobs



## Commercial Fishing

- Number 1 Value Fish Port; \$1 Billion Industry; 500 vessels
- 65.5 Million pounds of fish valued over \$280 million; 500 Vessels
- 35 Seafood Processing Plants and 25 Whole Sale Companies



## Cruise

- Brings ~1,500 People through the Port; 16 Ports of Call in 2009
- 5 Year contract with American Cruise Lines

## Ferry

- New England Fast Ferry and Cuttyhunk Ferry bring 120,000 people through the port annually
- Both operations are now moving freight

## Freight

- Maritime Terminal: 6 freighters of Moroccan citrus in 2008
- State Pier: Break bulk to Portugal, Africa, Haiti, & Cape Verde
- Sprague Terminal: Home Heating Fuel



## Recreation / Excursion

- 8 Marina's in the New Bedford / Fairhaven Harbor; Moorings
- 2007: 1 Sailing Tour; 2008: 3 Sailing Tours; Booking now for 2009
- 3 Charter Fishing Operations

## Barge Operations

- 4 Operate out of the Port carrying aggregate to the Islands as well as steel and other project cargo



## Shipyards

- Fairhaven Shipyard and Steamship Authority (Fairhaven)
- Major employers and support Commercial Fishing Industry



## Supporting Services

- Over 75 supporting businesses
- Ice; Fuel; Vessel Painting; Welding; Electric; Legal; Insurance; Settlement Houses; Salvage

# Opportunity for Future Growth

**#1 Value Fishing Port in Nation**

**Industry Growth**

(Cruise, Ferry, Shipping, Recreational Boating, Ship Repair)

**Trade Expected to Double**

**Larger Vessels Can Use the Harbor**

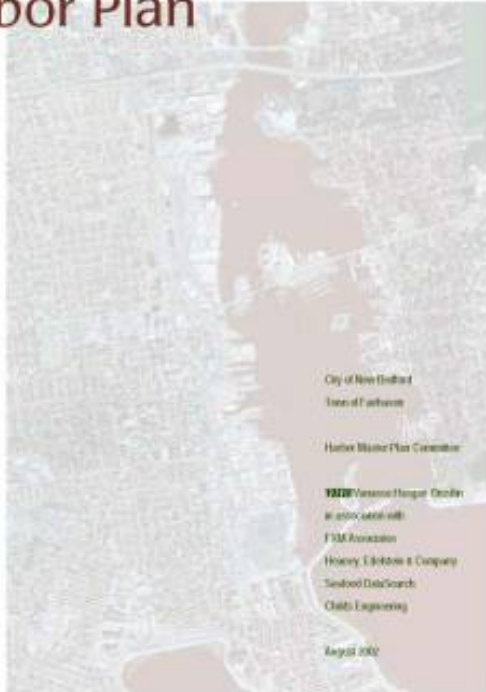
**Modern Piloting Rules Dictate Deepening**



# How Decisions are Made



## New Bedford/Fairhaven Harbor Plan

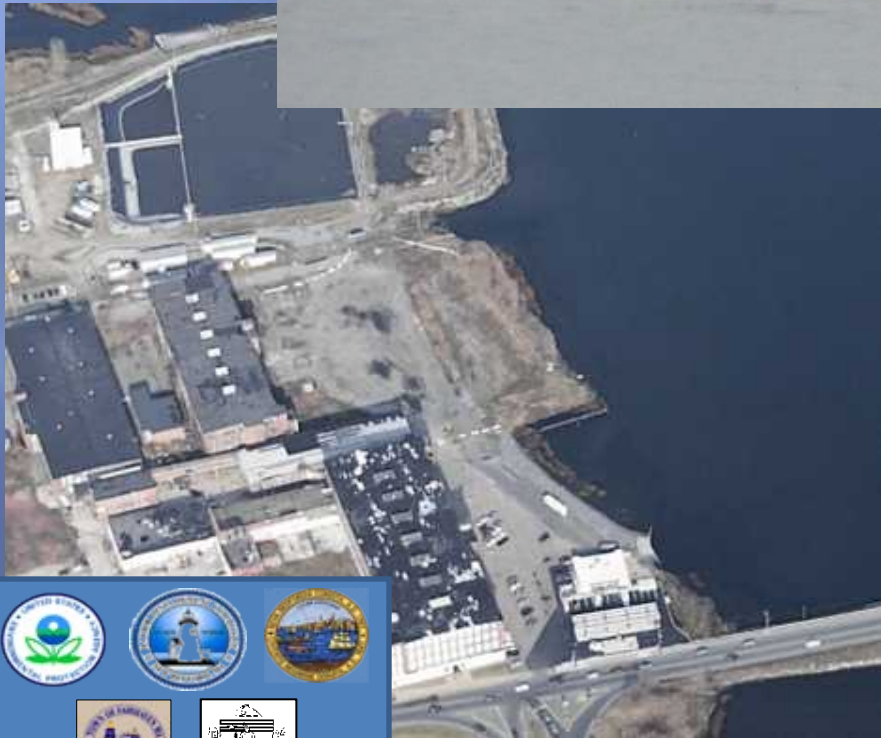


- Harbor Plan
- Dredge Materials Management Plan
- Committee of City and Town Officials, and State and Federal Regulators Meets Monthly



# Phase III Navigational Dredging Upper Harbor

Complete





# Phase III Navigational Dredging: Lower/Inner Harbor



Underway: June 30 target completion date



# The Story to Date

## Phase I, II, III

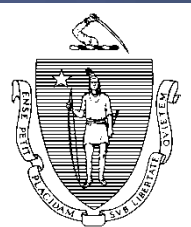
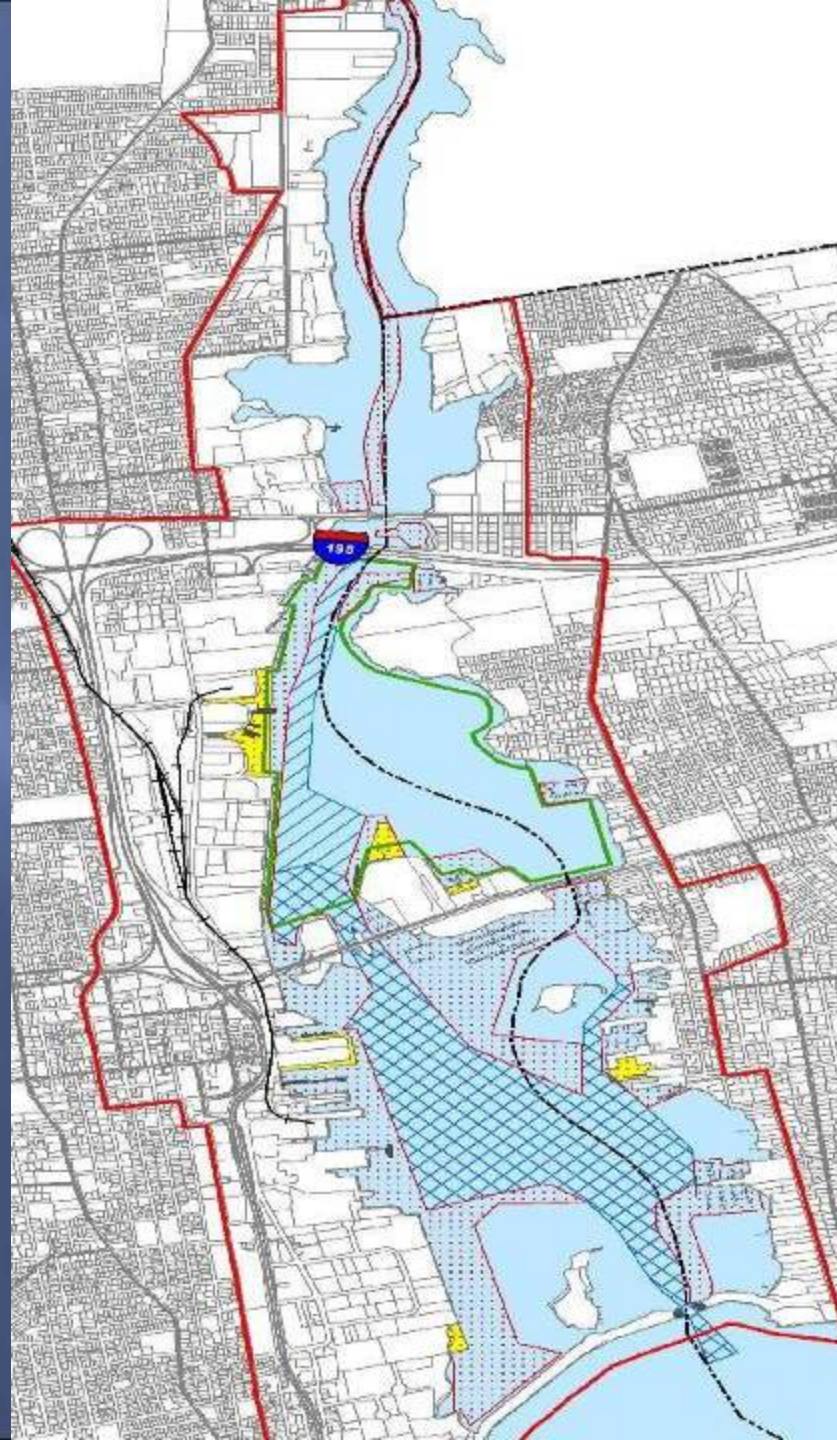


- Industry Progress and Clean-up
- Freighters in Port for the first time in 50 years
- Removed 200,000 cubic yards of contaminated sediment
- Phase III dredging is currently underway, removing another 50,000 cubic yards of contaminated sediment
- 130,000 cubic yards of the material dredged has been placed in CAD cells





# CAD CELL TECHNOLOGY NEW BEDFORD/ FAIRHAVEN HARBOR



# Navigational Dredging Sediment Disposal Method Selection Process



**Fact: Sediments Throughout the Harbor Contain Some Level of Contamination.**

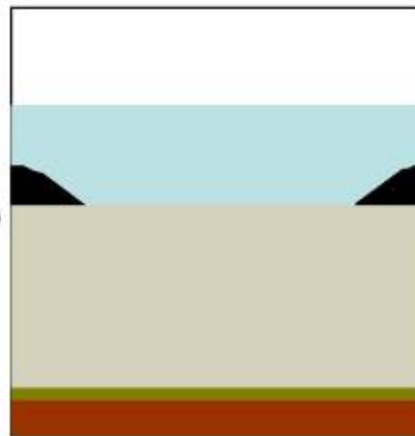
**In 2003, DEP and CZM Published a Study called the DMMP:**

***The Study found CAD Cells to be the best solution for Navigational Dredging.***

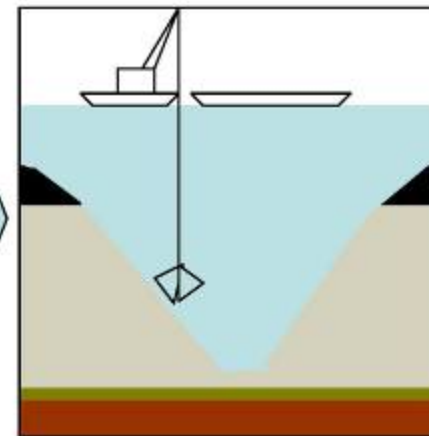




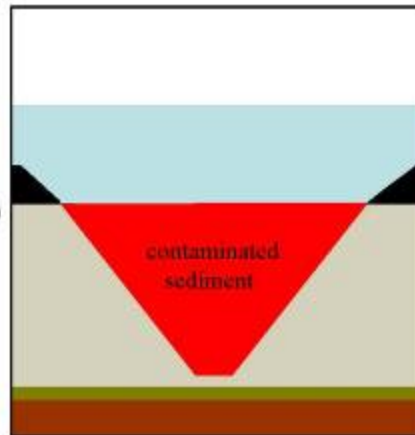
1. Harbor bottom as is



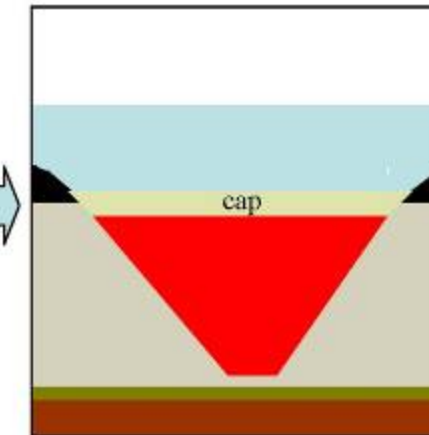
2. Excavation of silts



3. Excavation of sand and gravel



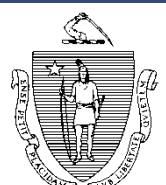
4. Placement of dredged sediments into the CAD cell



5. Placement of clean cap (after consolidation)

# WHAT IS A CAD CELL?

- Confined Aquatic Disposal Cell



# PUBLISHED REPORTS OF CAD CELL USAGE

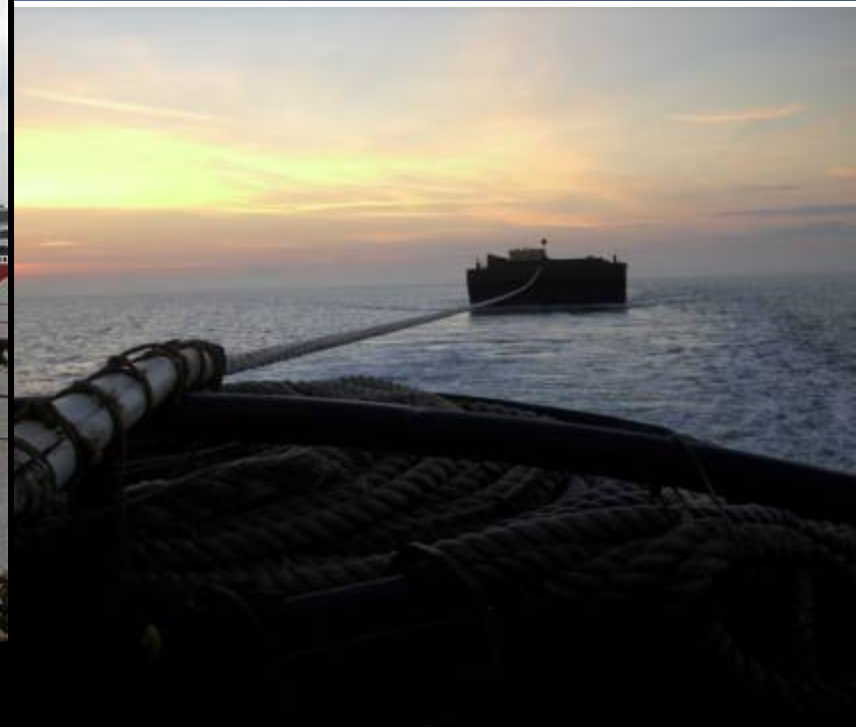


**“Environmental and human health risk assessment of the CAD cell alternative has shown that it can provide one of the lowest risk options compared with other alternatives (Kane-Driscoll et al, 2002).”**

*From Paper Presented at 2005  
3<sup>rd</sup> International Conference on  
Remediation of Contaminated  
Sediment, by Thomas J.  
Fredette,  
US Army Corps of Engineers –  
New England District*



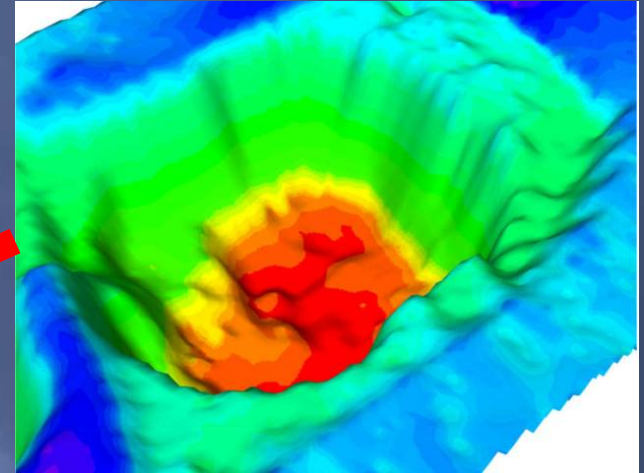
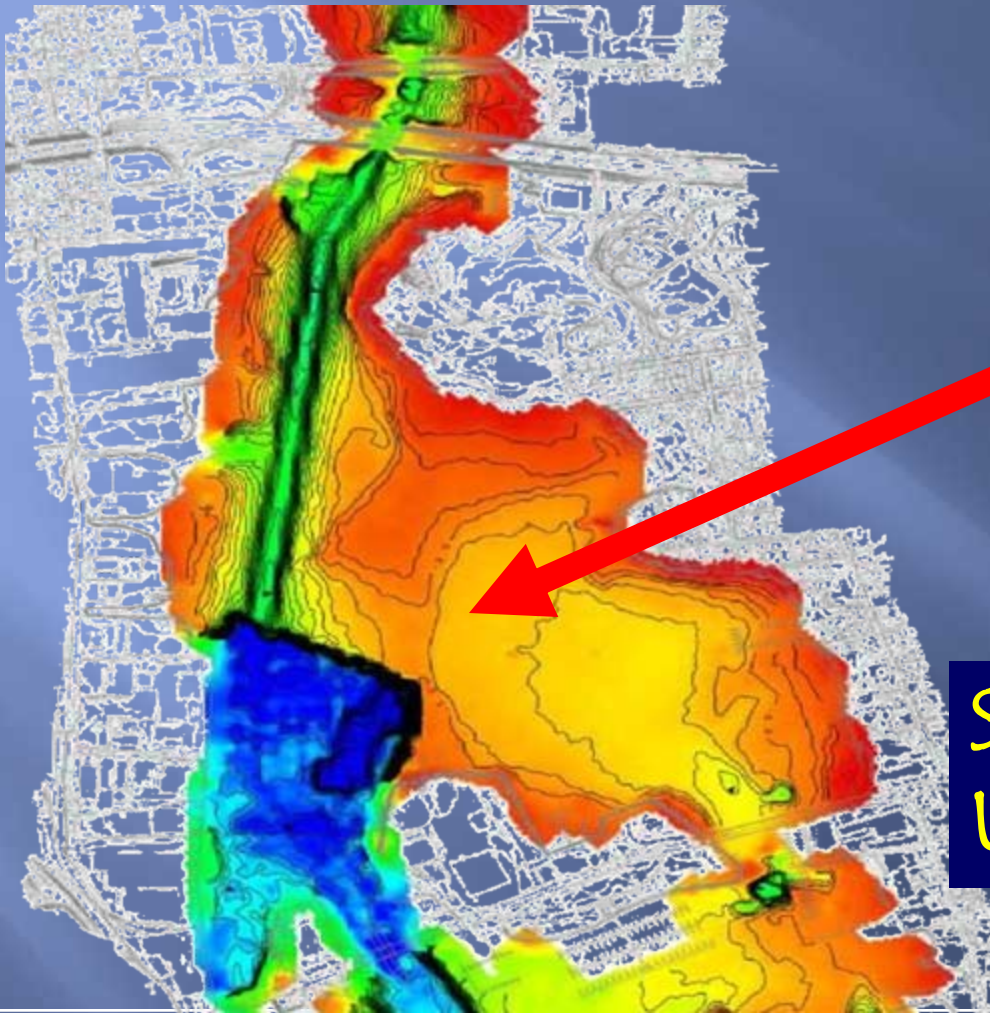
# CONSTRUCTION OF CAD CELLS IN NEW BEDFORD/FAIRHAVEN HARBOR



# STATUS OF CAD CELLS IN NEW BEDFORD/FAIRHAVEN HARBOR



# RECENTLY COMPLETED CAD CELL #2



Successful Disposal of  
Upper Harbor Material





Cornell-Dubilier

Second capacitor facility  
in outer harbor

Aerovox

Electronic  
capacitor facility  
released an estimated 275  
tons of PCBs from the  
1940s to the 1970s

Part 2 - the Superfund harbor PCB cleanup



the upper harbor, looking north

Aerovox

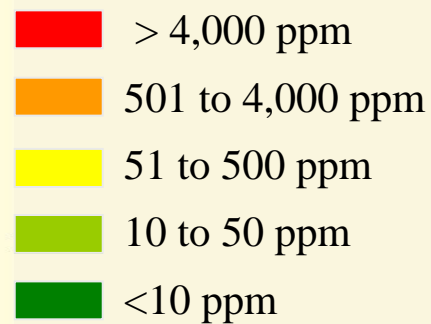


11/10/2003



Aerovox

Color coded sediment PCB levels  
(prior to dredging)

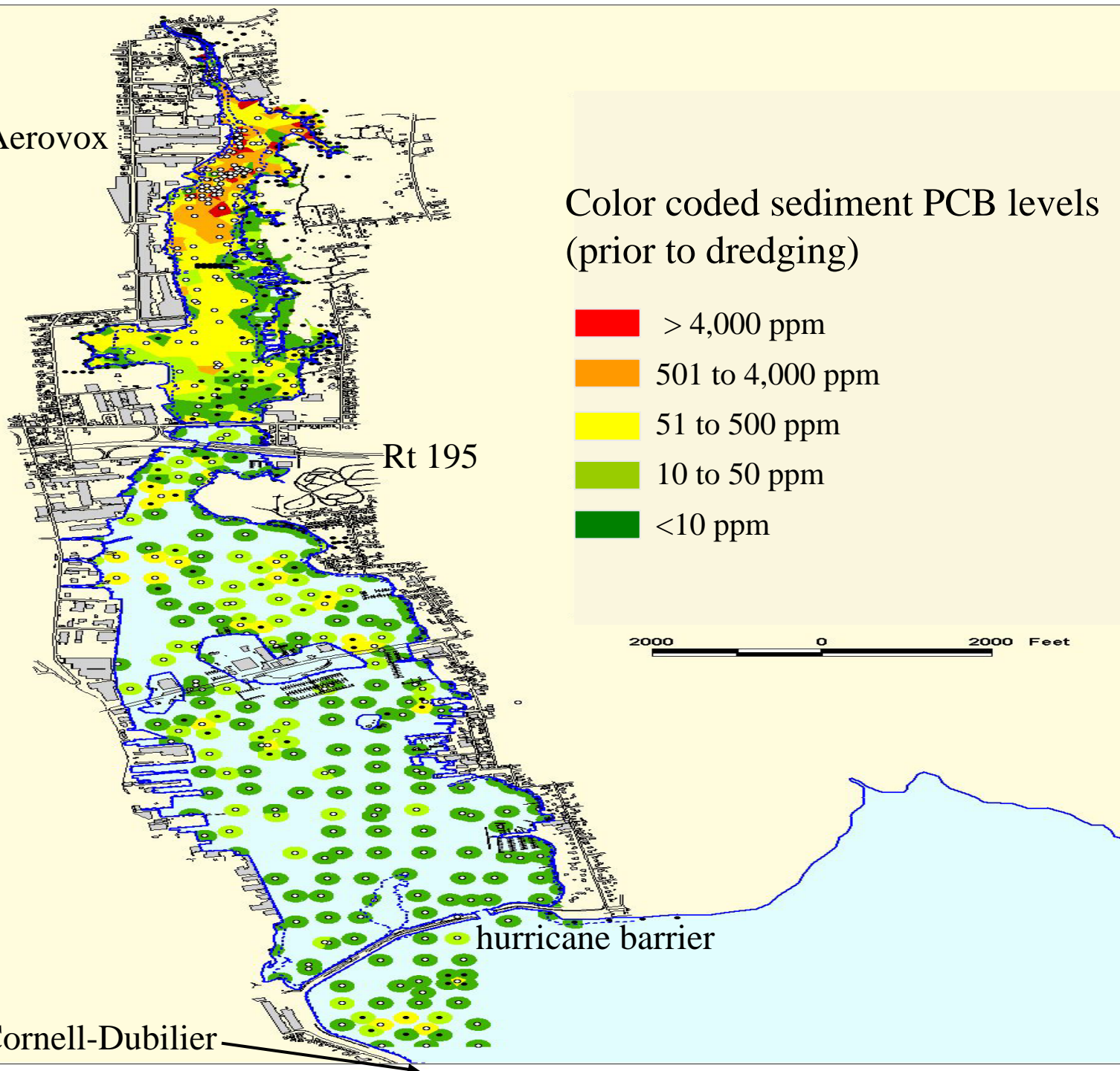


Rt 195

2000 0 2000 Feet

hurricane barrier

Cornell-Dubilier



The 1979 state  
fishing ban -  
due to PCBs  
(covers 18,000 acres)



**Do NOT eat any fish**

No coma pescado

Não coma peixe



**Do NOT eat any lobster**

No coma langosta

Não coma lagosta



**Do NOT eat bottom feeding fish**

No coma pescado de fundo:

Não coma peixe de fundo:

- ♦ flounder
- ♦ linguado
- ♦ solha
- ♦ tautog
- ♦ tautoga
- ♦ budião da ostra
- ♦ scup
- ♦ eel
- ♦ sargo
- ♦ anguila
- ♦ sargo
- ♦ anguila



**Do NOT eat any shellfish**

No coma mariscos

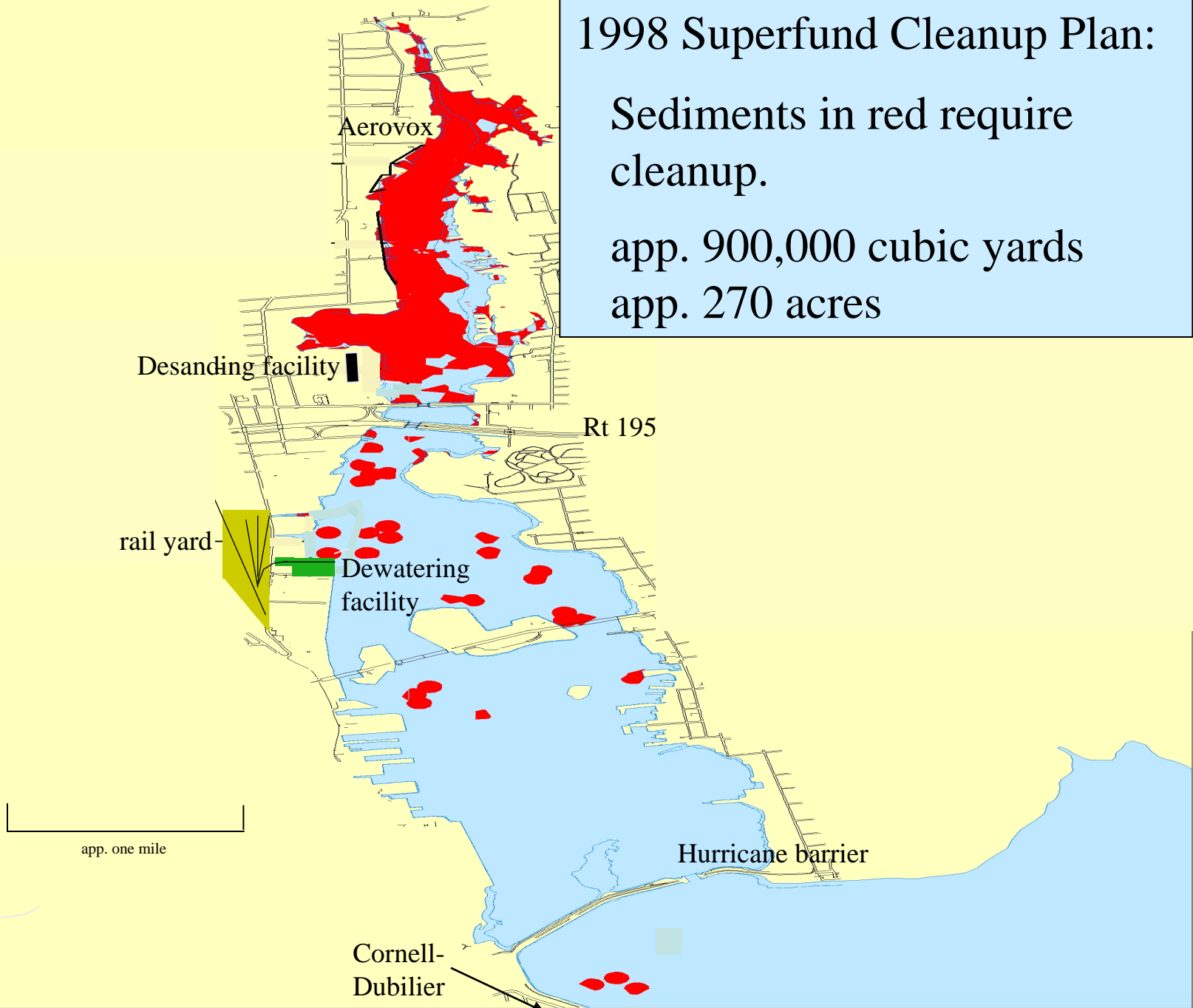
Não coma mariscos

# 1998 Superfund Cleanup Plan:

Sediments in red require  
cleanup.

app. 900,000 cubic yards

app. 270 acres



QUICK look at progress to date



Acushnet shoreline cleanup – 1999-2000



NSTAR Power Cable Relocation – 2001

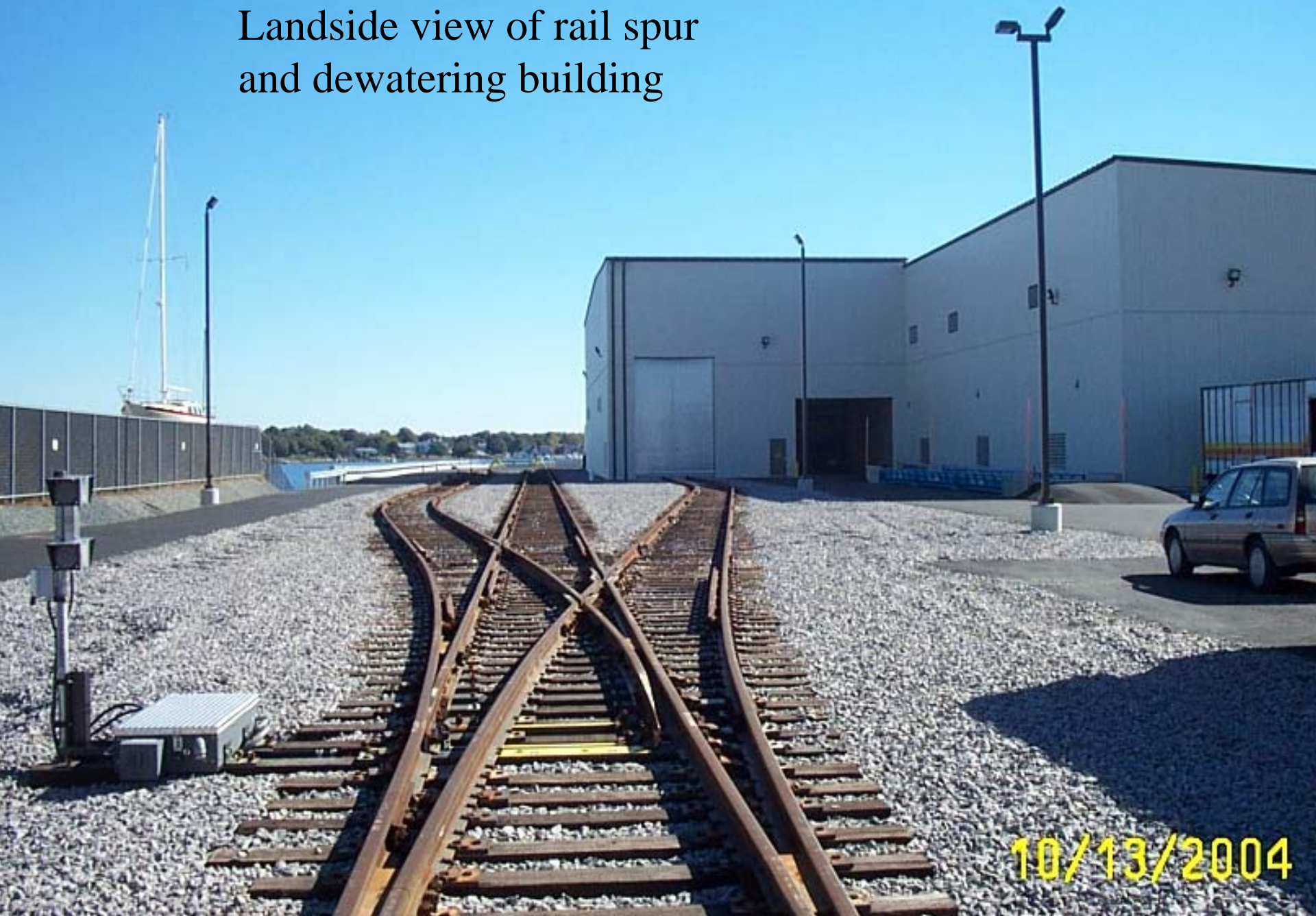
## Dewatering facility bulkhead - 2002/03



# Dewatering facility and rail spur - 2002-04



Landside view of rail spur  
and dewatering building



10/13/2004



Combined sewer overflow (CSO) pipe relocations  
to make room for the dewatering facility - 2002-04

Demolition and removal of derelict vessels to allow shoreline business relocation - 2002





North of Wood Street cleanup – 2002/03

# The restored river and stream banks (2008)



2005 - pilot underwater cap near Cornell-Dubilier mill



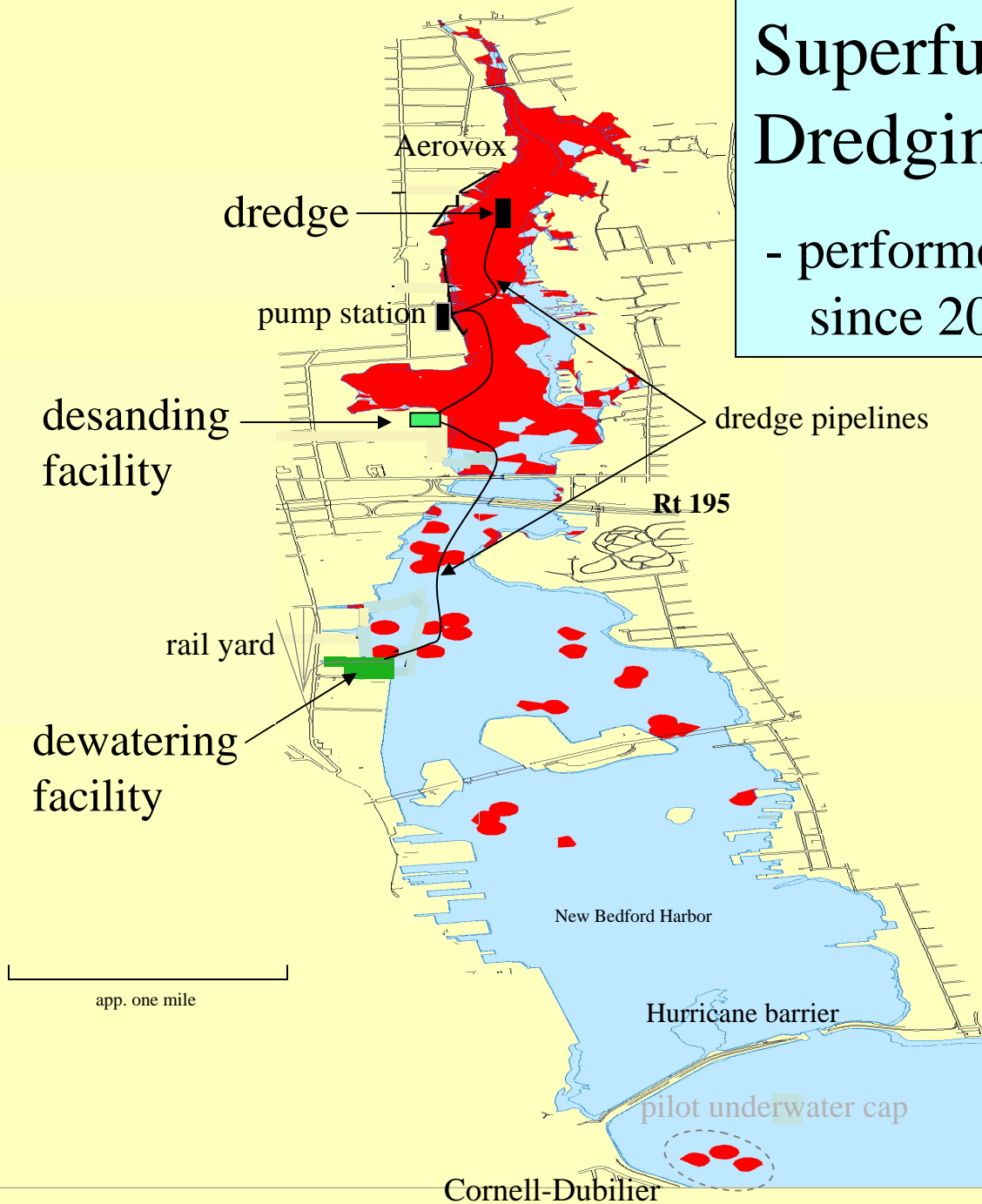
07/10/2005 09:33:01



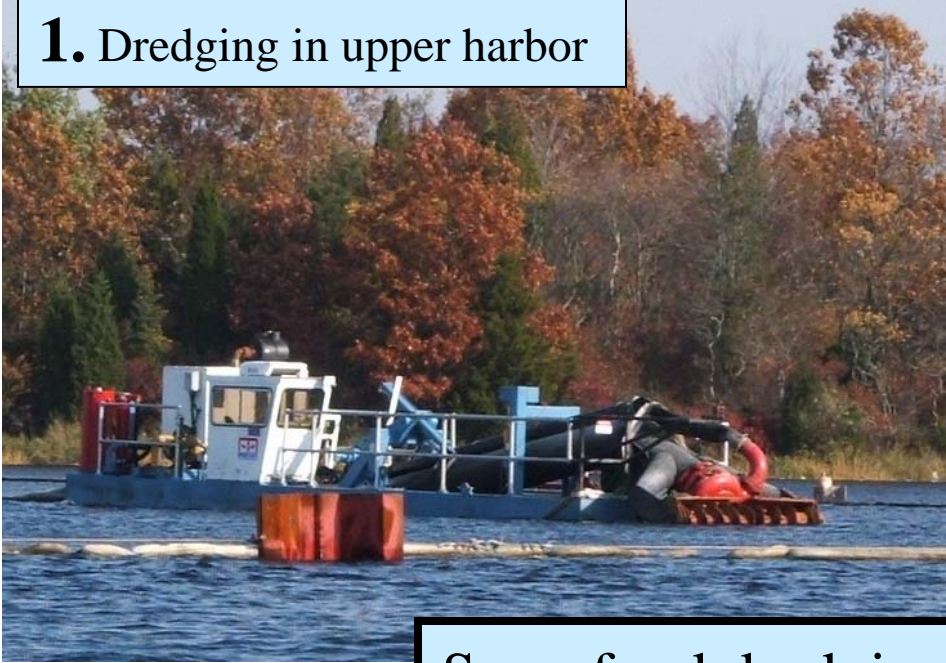
Aerovox shoreline cleanup - spring/summer 2008

# Superfund Full Scale Dredging Process

- performed annually  
since 2004



**1. Dredging in upper harbor**



**2. Desanding**



**Superfund dredging and disposal operations**

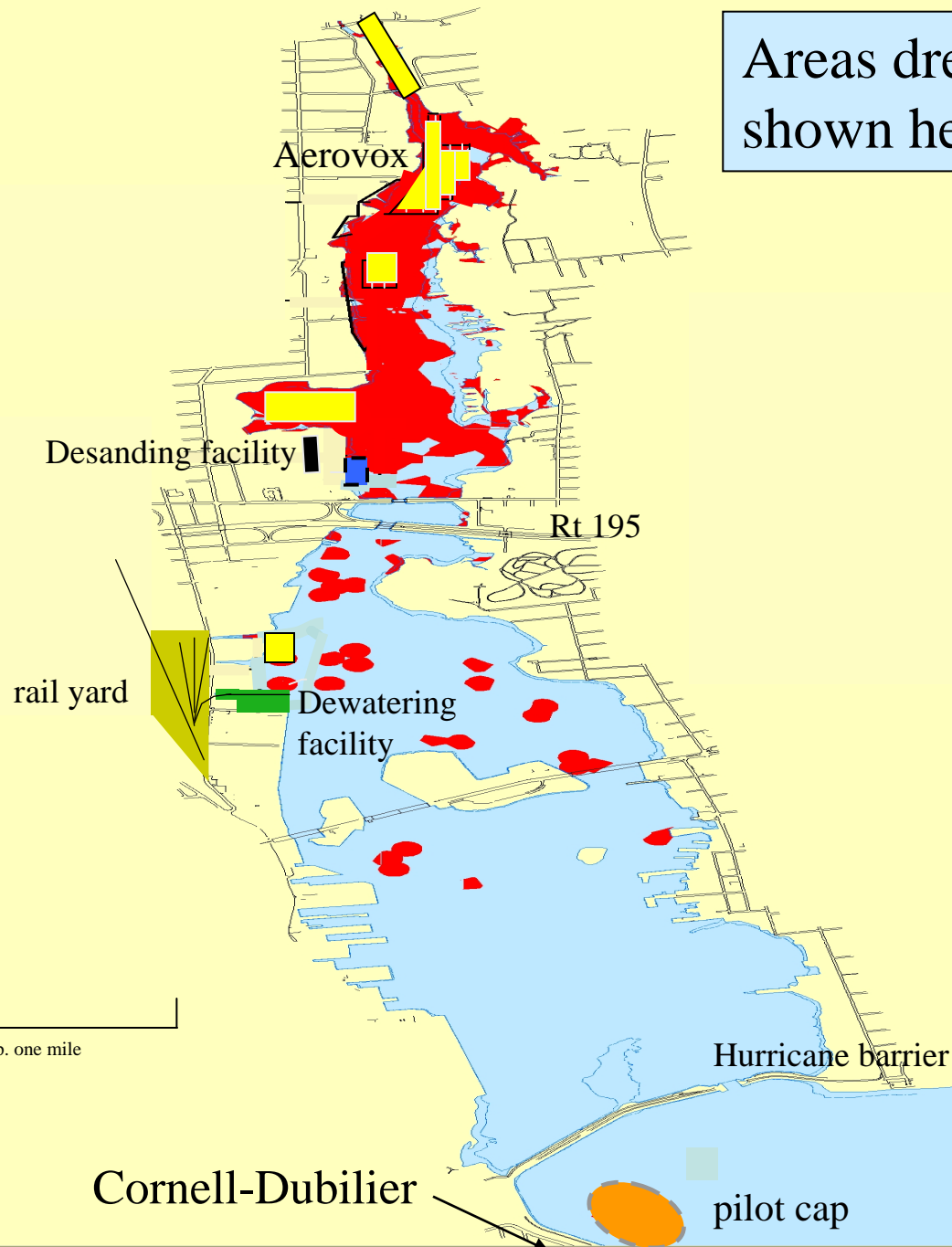
**3. Dewatering**



**4. Loading to rail for offsite disposal**

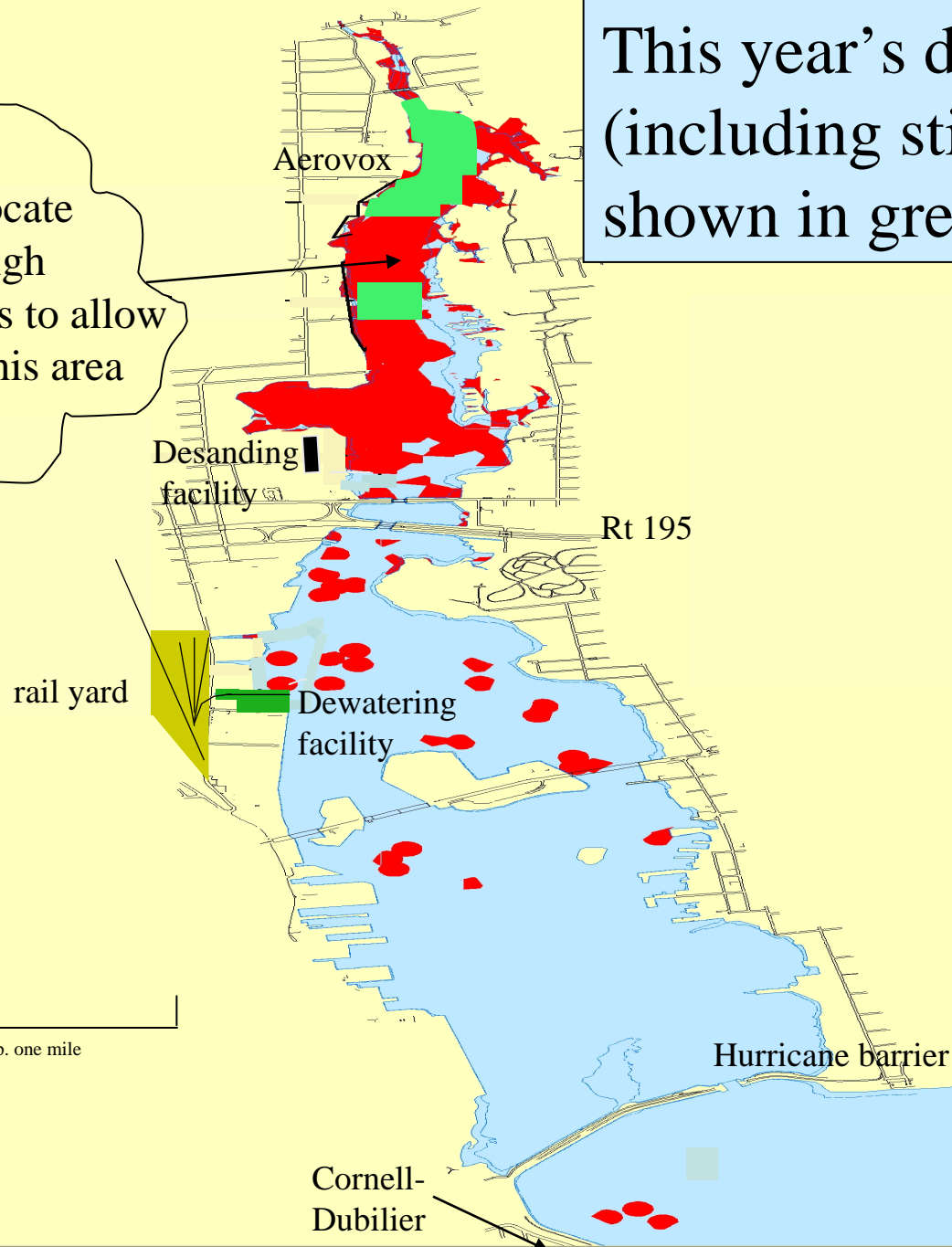


Areas dredged to date  
shown here in yellow

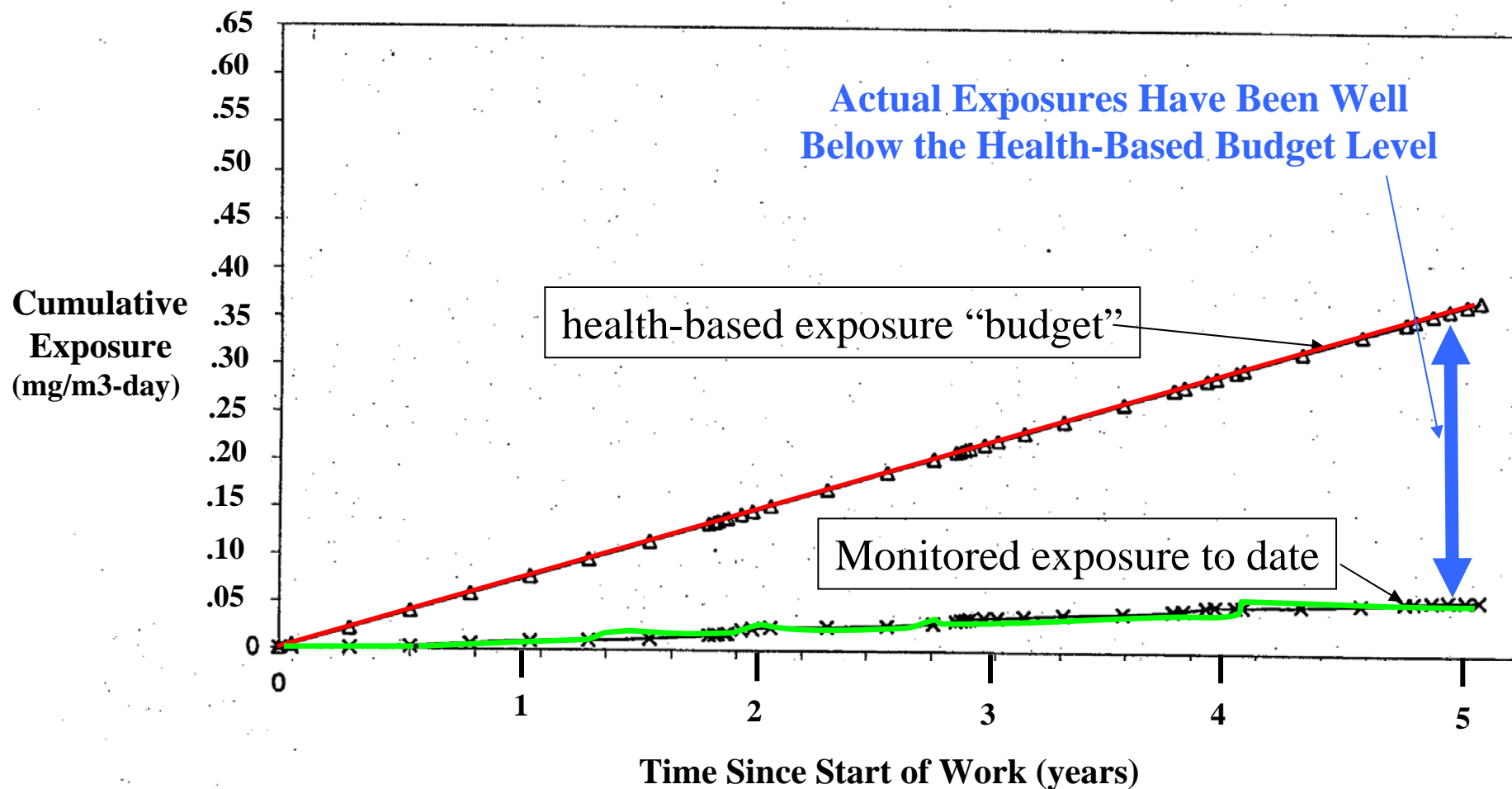


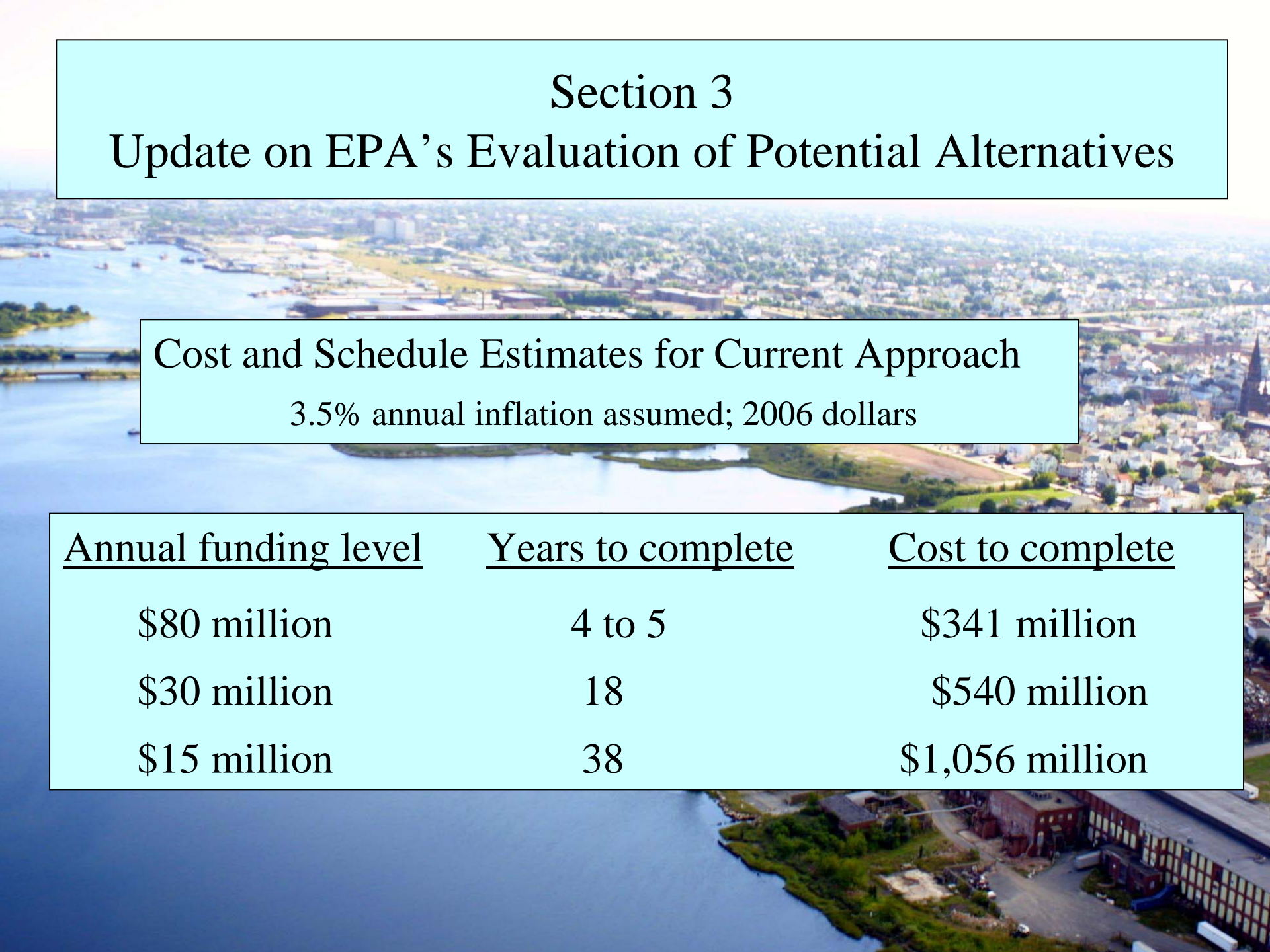
This year's dredging areas  
(including stimulus funds)  
shown in green:

Will also relocate  
submerged high  
voltage cables to allow  
dredging in this area



# Comparing Coffin Ave air monitoring data to health-based “budget”





## Section 3

# Update on EPA's Evaluation of Potential Alternatives

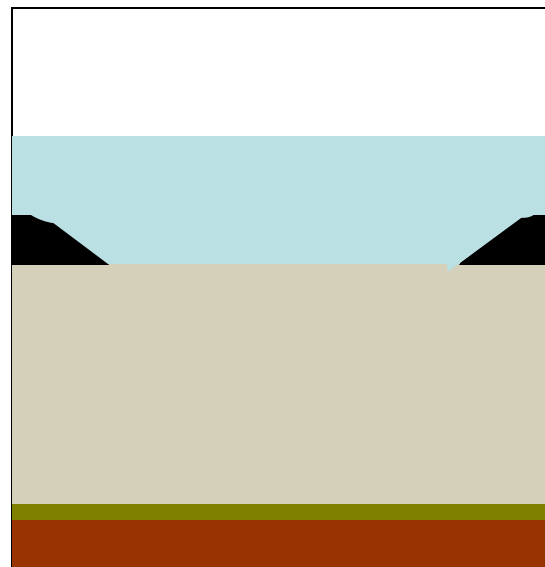
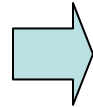
### Cost and Schedule Estimates for Current Approach

3.5% annual inflation assumed; 2006 dollars

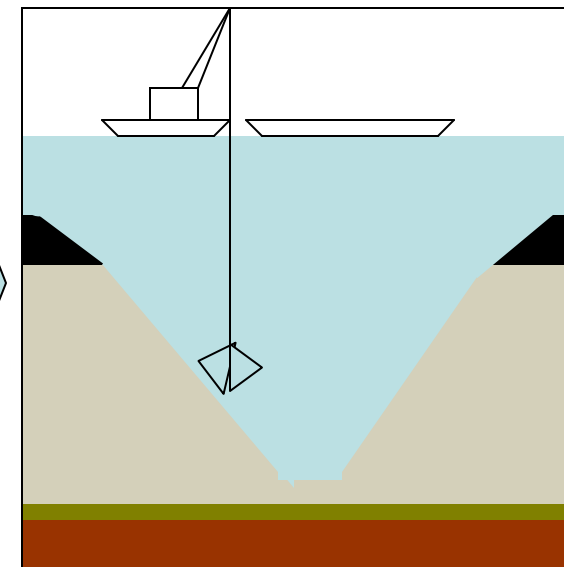
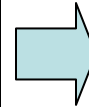
| <u>Annual funding level</u> | <u>Years to complete</u> | <u>Cost to complete</u> |
|-----------------------------|--------------------------|-------------------------|
| \$80 million                | 4 to 5                   | \$341 million           |
| \$30 million                | 18                       | \$540 million           |
| \$15 million                | 38                       | \$1,056 million         |



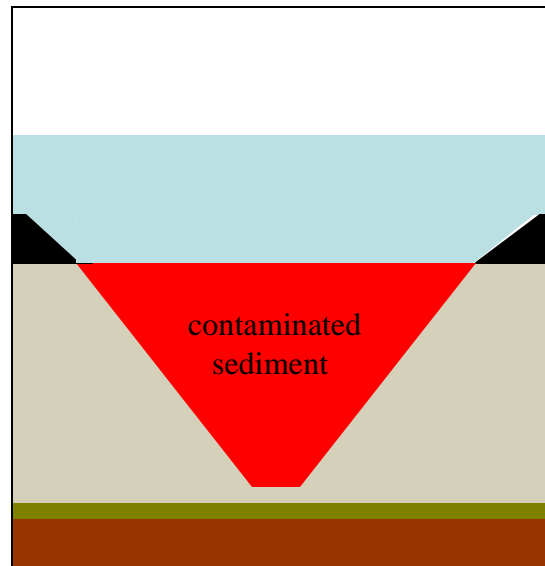
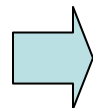
**1.** Harbor bottom as is



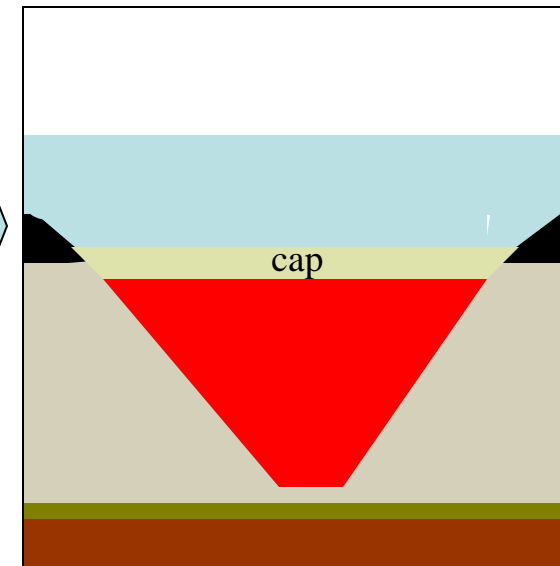
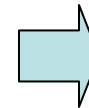
**2.** Excavation of silts



**3.** Excavation of sand and gravel



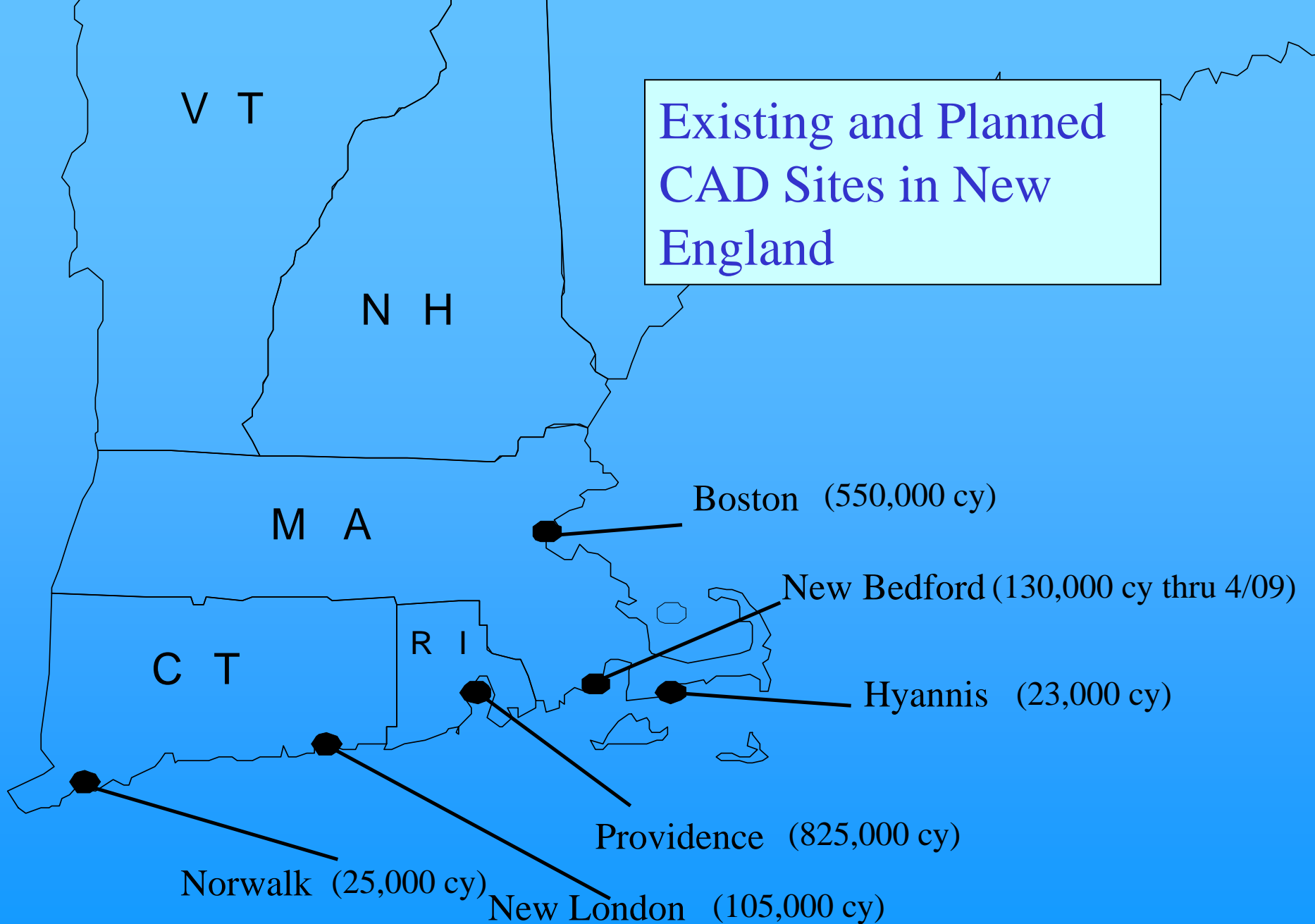
**4.** Placement of dredged sediments into the CAD cell



**5.** Placement of clean cap  
(after consolidation)

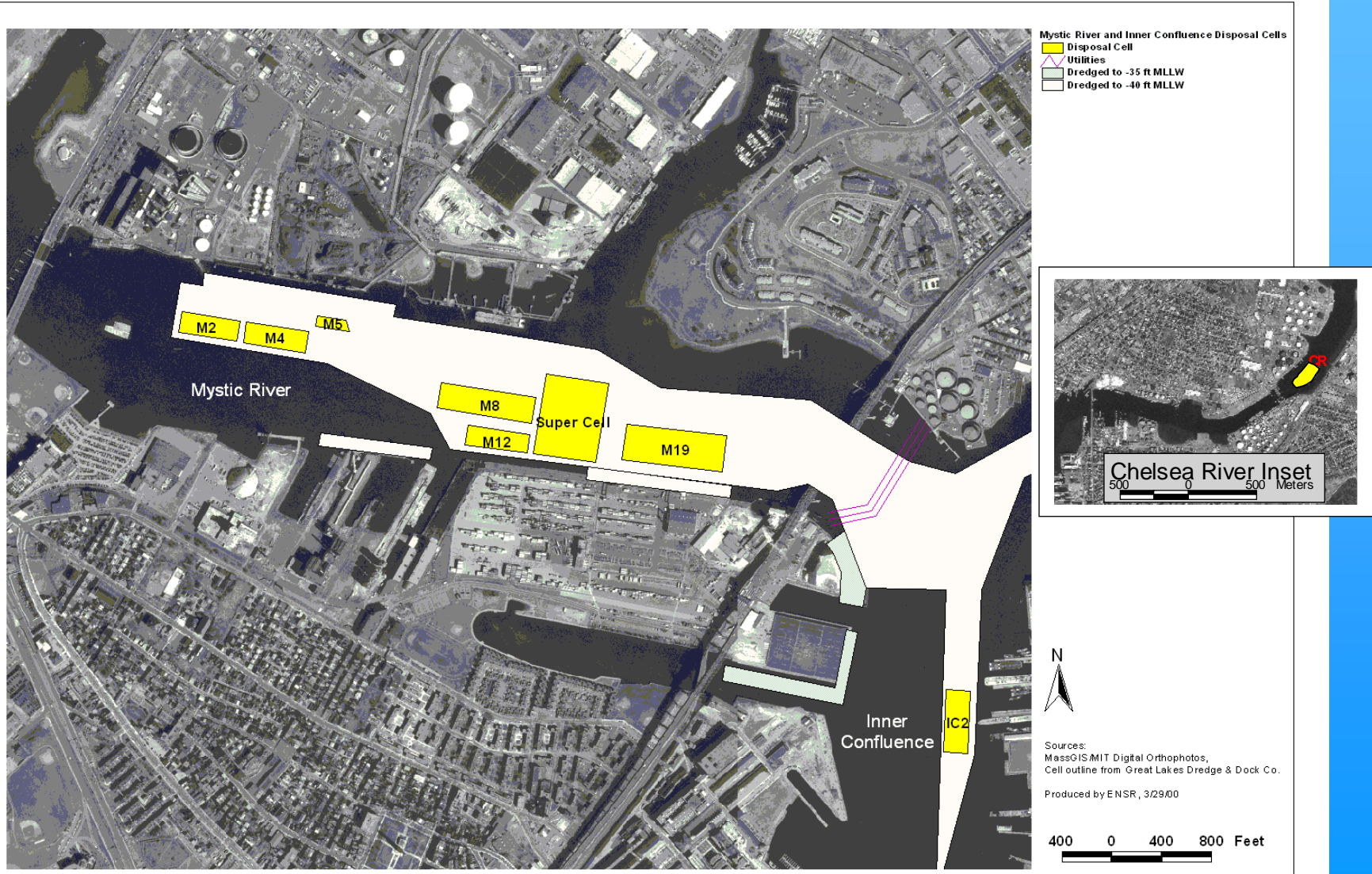
One  
alternative:  
use CAD  
cells to  
dispose of  
some of the  
sediment.

## Existing and Planned CAD Sites in New England



# Boston Harbor CAD Cells

Figure 2: Boston Harbor Navigation Improvement Project, Mystic River and Inner Confluence Disposal Cells



# Providence In-Channel CAD Locations



New Bedford's CAD cell “#1” being excavated in 2005  
(for navigational dredging)



# On-going CAD cell evaluation: preliminary results

- Significant savings in time AND cost to complete
- Other urban harbors have successfully used CAD cells
- computer modeling will evaluate protectiveness
- environmental monitoring of City's navigational CAD cell (work in progress)

Any Superfund CAD cell in the lower harbor would be in the same general area as the City's existing navigational CAD cells.



Next step for public comment and decision making for any changes to the harbor cleanup:

- Winter 2009/2010 for potential lower harbor CAD cell

(again, still in the evaluation phase)

Questions?

